

Message

**From:** GT700@dnvps.com [GT700@dnvps.com]  
**Sent:** 2/28/2014 10:08:24 PM  
**To:** Robert Love [rlove@aet-tankers.com]  
**CC:** Eagle Anaheim [eagle.anaheim@aet-tankers.com]; AETSM - Team Atlantic [Team-Atl@aet-tankers.com]  
**Subject:** EAGLE ANAHEIM, FUEL ANALYSIS REPORT, BOLIVAR ROADS, 15-FEB-2014, SAMPLE : HOU1405509

To: AMERICAN EAGLE TANKERS, INC.  
 Attn: Mr Robert Love, Bunker Manager  
 Attn: Atlantic Fleet

Cc: The Master Of 'EAGLE ANAHEIM'  
 Attn: Chief Engineer

DNV Petroleum Services - Fuel Analysis Report dated: 28-Feb-2014

Vessel: **EAGLE ANAHEIM (9182942)**

Sample Number	HOU1405509
Product Type	(HFO)
Bunker Port	BOLIVAR ROADS
Bunker Date	15-Feb-2014
Sampling Point	SHIP MANIFOLD
Sampling Method	CONTINUOUS DRIP
Sent From	HOUSTON-DOWNTOWN
Date Sent	18-Feb-2014
Arrived at Lab	27-Feb-2014
Supplier	PENINSULA
Loaded From	BUFFALO 400
Quantity per C.Eng.	900

Seal data DNVPS, SEAL INTACT, 7469115

Related Samples	
Supplier	7469116
Ship	7469117
SHIP MARPOL	7469118
MARPOL	36438683

Receipt Data	Unit	
Source Of Data		B.D.N.
Density @ 15°C	kg/m <sup>3</sup>	990.3
Viscosity @ 50°C	mm <sup>2</sup> /s	342.3
Sulfur	% m/m	2.12
Volume @ 60°F	bbl	5724.000
Quantity	MT	900.000

Tested Parameter	Unit	Result	RMG380
Density @ 15°C	kg/m <sup>3</sup>	989.5	991.0
Viscosity @ 50°C	mm <sup>2</sup> /s	341.2	380.0
Water	% V/V	0.2	0.5
Micro Carbon Residue	% m/m	13	18
Sulfur	% m/m	2.33	3.50
Total Sediment Potential	% m/m	0.01	0.10
Ash	% m/m	0.06	0.15
Vanadium	mg/kg	101	300
Sodium	mg/kg	34	
Aluminium	mg/kg	21	
Silicon	mg/kg	19	

Iron	mg/kg	28	
Nickel	mg/kg	44	
Calcium	mg/kg	22	
Magnesium	mg/kg	2	
Zinc	mg/kg	8	
Phosphorus	mg/kg	7	
Potassium	mg/kg	2	
Pour Point	°C	LT 24	30
Flash Point	°C	GT 70	60
Acid Number	mg KOH/g	1.54	
Strong Acid Number	mg KOH/g	0.00	
<u>Calculated Values</u>			
Aluminium + Silicon	mg/kg	40	80
Net Specific Energy	MJ/kg	40.35	
CCAI (Ignition Quality)	-	852	
Quantity (Weight)	MT	899.146	
Quantity Difference	MT	-0.854	

**Note:**

LT means Less Than, GT means Greater Than.

Quantity (Weight) is based on BDN Volume, DNVPS Density and a weight factor of 1.1 kg/m<sup>3</sup> (ASTM D1250-80 Table 56).

Specification Comparison :

Results compared with amended ISO 8217:2005 specification RMG380, table 2. Based on this sample the specification is met.

Operational Advice :

Approximate fuel temperatures:

**Injection:**

140°C for 10 mm<sup>2</sup>/s  
125°C for 15 mm<sup>2</sup>/s  
115°C for 20 mm<sup>2</sup>/s  
105°C for 25 mm<sup>2</sup>/s

**Transfer :**

40°C

Best Regards,

On behalf of DNV Petroleum Services Pte Ltd

Qamar Hussain

Technical Advisor

End of Report for EAGLE ANAHEIM

If not properly aligned, please change font to Courier New, size 10.

Reference to part(s) of this report which may lead to misinterpretation is prohibited.

For technical or operational advice or further information on this report please contact your nearest DNVPS office or contact us directly at

Tel : +1 (281) 470 1030

Email : Houston@dnvps.com

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